



**UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/773,180	12/27/96	WATANABE	H 043872

MM51/0710
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EXAMINER
LABALLE, C

ART UNIT	PAPER NUMBER
2834	11

DATE MAILED: 07/10/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/773,180

Applicant(s)
Watanabe et al

Examiner
Clayton E. LaBalle

Group Art Unit
2834



☒ Responsive to communication(s) filed on Apr 14, 1998

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 2-25 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 2-25 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☒ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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After consideration of Applicant's response the examiner makes the following rejections:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 5, 7, 11-12 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese reference 3-150041 (Japan ('041)) in view of Ishizaki and Pollick.

Japan ('041) discloses the sealed actuator essentially as claimed except for utilizing a resolver with a salient pole resolver, locating the stator in a housing around the rotor and reinforcing means. For example, Japan ('041) teaches a sealed actuator with a stator (15), a rotor (16), a barrier (23A), a resolver with a stator (28) and a rotor (29). There also is a shield member (31) between the stator of the actuator and the resolver stator.

Ishizaki teaches that it is well known to form a resolver with a salient pole rotor (10) as shown in figure 2. This construction, as disclosed Ishizaki, has the advantage of being simple since there are no windings necessary on the rotor (see lines 42-45, col.1). Further, this arrangement would be very durable.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized a resolver with a salient pole rotor in the sealed actuator of Japan ('041) in order to take advantage of the simple construction as disclosed by Ishizaki.

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Pollick teaches that it is well known to form a sealed actuator with the stator (2) mounted in a housing (1) which surrounds the rotor (3). The actuator also includes reinforcing means (5, 16) which supports the barrier (4). The reinforcing means are made of metal as is the barrier. Such an arrangement is better adapted to drive a shaft than the motor configuration of Japan ('041).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have formed the actuator of Japan ('041) with a housing and the stator supported on the housing around the rotor with reinforcing means, as shown by Pollick, in order to drive a shaft instead of a drum.

Claims 3-4, 6, 8-9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan ('041) in view of Ishizaki and Pollick and further in view of Auchterlonie

Japan ('041), Ishizaki and Pollick disclose the sealed actuator essentially as claimed except for utilizing a differential circuit type resolver.

Auchterlonie teaches that it is well known to utilize a differential circuit type resolver to determine absolute position of a moving body. Auchterlonie further discloses that the resolver can be mounted on a non-magnetic member in order to increase the accuracy of the resolver (see lines 44-51, col.5).

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It would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized a differential circuit type resolver in the actuator of Japan ('041) Ishizaki and Pollick in order to determine the absolute position of the rotor, as disclosed by Auchterlonie.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan ('041) in view of Ishizaki and Pollick and further in view of Anger.

Japan ('041), Ishizaki and Pollick disclose the actuator essentially as claimed except for utilizing both a fine and a coarse resolver.

Anger teaches that it is well known to utilize both a fine resolver and a coarse resolver to simultaneously determine both fine and coarse positions of the system.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided both fine and coarse resolvers in the actuator of Japan ('041), Ishizaki and Pollick in order to simultaneously determine the coarse and fine position of the moving member, as shown by Anger.

Claims 16-18 22-23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan ('041) in view of Ishizaki and Pollick and further in view of Japanese reference 3-150042 (Japan ('042)).

Japan ('041), Ishizaki and Pollick disclose the sealed actuator essentially as claimed except for utilizing a plurality of actuators.

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Japan ('042) teaches that it is well known to provide a plurality of actuator connected together to form a single unit. This arrangement is well known in the art to increase the output capacity of the actuator system. The output torque can be increased and the reliability of the actuator can be improved.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized a plurality of the actuators of Japan ('041), Ishizaki and Pollick connected together in a single system, as shown by Japan ('042), in order to increase the actuators output and reliability.

Claims 19-20 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan ('041) in view of Ishizaki, Pollick and Japan ('042) and further in view of Auchterlonie

Japan ('041), Ishizaki, Pollick and Japan ('042) disclose the sealed actuator system essentially as claimed except for utilizing a differential circuit type resolver.

Auchterlonie teaches that it is well known to utilize a differential circuit type resolver to determine absolute position of a moving body. Auchterlonie further discloses that the resolver can be mounted on a non-magnetic member in order to increase the accuracy of the resolver (see lines 44-51, col.5).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized a differential circuit type resolver in the actuator system of Japan ('041), Ishizaki,

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Pollick and Japan ('042) in order to determine the absolute position of the rotor, as disclosed by Auchterlonie.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan ('041) in view of Ishizaki, Pollick and Japan ('042) and further in view of Anger.

Japan ('041), Ishizaki, Pollick and Japan ('042) disclose the actuator system essentially as claimed except for utilizing both a fine and a coarse resolver.

Anger teaches that it is well known to utilize both a fine resolver and a coarse resolver to simultaneously determine both fine and coarse positions of the system.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided both fine and coarse resolvers in the actuator system of Japan ('041), Ishizaki, Pollick and Japan ('042) in order to simultaneously determine the coarse and fine position of the moving member, as shown by Anger.

Applicant's arguments with respect to claims 2-25 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clayton E. LaBalle whose telephone number is (703) 308-0519. The examiner can normally be reached on Monday-Thursday from 7:30 AM-5:00 PM and every other Friday from 7:30 AM-4:00 PM. The above number is equipped with voice mail. The examiner

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can also be reached via E-mail at Clayton.Laballe@uspto.gov to schedule an interview. E-mail should not be utilized to discuss the merits of the application.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Stephan, can be reached on (703) 308-2826. The fax phone number for this Group is (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1782.

A handwritten signature in cursive script, reading "Clayton E. LaBalle".

Clayton E. LaBalle
Primary Examiner
Art Unit 2834
July 03, 1998